UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,649	03/09/2001	Akira Yoda	2091-0234P	3948

2292   7590   06/26/2007
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER
THOMPSON, JAMES A

ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
06/26/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

	Application No.	Applicant(s)
	09/801,649	YODA, AKIRA
Office Action Summary	Examiner	Art Unit	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 April 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24 and 29-52</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24 and 29-52</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 March 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☒ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN
PRIMARY EXAMINER

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Priority

1.   Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 09 March 2000. It is noted, however, that applicant has not filed a certified copy of the 065276/2000 application as required by 35 U.S.C. 119(b). **Currently, there is no such foreign priority document in the case file.**

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09 April 2007 has been entered.

Response to Arguments

3.   Applicant's arguments filed 09 April 2007 have been fully considered but they are not persuasive. Applicant's arguments are directed to the present amendments to the claims. Thus, the prior art rejections set forth below, which are based on the present amendments to the claims, fully address and respond to Applicant's present arguments.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   **Claims 1-2, 6-7, 11-12, 16-19, 29-31, 33-35, 37-39, 41-43 and 45-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Evans (US Patent 6,577,746 B1).**

Regarding claims 1, 6 and 11: Evans discloses an image output apparatus (figure 1 of Evans) comprising: reading means (figure 1(14) of Evans) for obtaining initial image data (figure 1(30) of Evans) representing an initial image recorded in an original image (column 1, line 66 to column 2, line 1 of Evans) and ID information (watermark ID) for identifying an original picture by reading the original image having at least a portion of the original picture and the ID information inseparable from the original picture (column 2, lines 7-11 and lines 28-32 of Evans - *as is well-known, an encoded watermark ID is inseparable from the image*), and wherein the original image further includes at least second image data (column 2, lines 61-65 of Evans – *watermark image is second image data*); storage means (figure 1(34) of Evans) for storing a plurality of sets of original picture data in relation to ID information (column 2, lines 30-35 of Evans); reading means (figure 1(22) of Evans) for reading equivalent original picture data ("pristine version") representing an equivalent original picture corresponding to the ID information of the original picture from the storage means (column 2, lines 25-35 of Evans); processing means (figure 1(20) of Evans) for obtaining processed image data for output by comparing the initial image data with the equivalent original picture data and carrying out processing (sizing, rotating, matching, etc.) on the equivalent original picture data (column 2, line 61 to column 3, line 6 of Evans); and output means (figure 1(28) of Evans) for obtaining a print by printing the processed image data (column 3, lines 14-20 and lines 23-28 of Evans), wherein the obtaining processed image data further comprises: extracting a portion of the initial image data that corresponds to the second image data (column 2, line 65 to column 3, line 2 and column 3, lines 57-62 of Evans – *watermark is extracted to produce pristine version of original image*); including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to the at least the portion of the original picture in the initial image data (column 3, lines 14-20 of Evans), wherein the portion of the equivalent original picture data in the processed image data geometrically agrees with the at least the portion of the original picture in the initial image (column 2, line 61 to column 3, line 6 of Evans); and composing the processed image data for output such that the second image data is in the processed image data and wherein the second image data overlays the portion of the equivalent original picture data in the processed image data (column 3, lines 13-32 of Evans – *watermark then applied to pristine picture, which is then output by a printer*).

Further regarding claim 1: The image output apparatus of claim 6 performs the image output method of claim 1.

Further regarding claim 11: The image output apparatus of claim 6 can be embodied on a computer-readable storage medium which causes a computer to execute the steps performed by said image output apparatus (column 4, lines 4-10 of Evans).

Regarding claims 2, 7 and 12: Evans discloses that the ID information is secretly embedded in the initial image (column 2, lines 12-14 and lines 36-39 of Evans). The ID information is in the form of a watermark that is detected from the scanned initial image (column 2, lines 12-14 and lines 36-39 of Evans). Thus, the ID information is secretly embedded in the initial image.

Regarding claim 16: Evans discloses a method to output image, comprising: receiving composition input data (figure 1(30) and column 1, line 66 to column 2, line 1 of Evans), wherein the composition input data includes an input image data, wherein the input image data includes at least a portion of an original picture data with ID information (watermark ID) corresponding to the original picture data embedded therein (column 2, lines 7-11 and lines 28-32 of Evans) and at least second image data (column 2, lines 61-65 of Evans – *watermark image is second image data*); extracting the ID information from the input image data (column 2, lines 25-32 of Evans); retrieving from storage an original image data corresponding to the ID information (column 2, lines 25-35 of Evans), wherein the original image data includes the original picture data with the related ID information embedded therein (column 3, lines 29-33 of Evans); and composing an output image data for output (column 3, lines 14-20 and lines 23-28 of Evans), by: replacing at least the portion of the original picture data of the input image data of the composition input data with a corresponding portion of the original image data retrieved from the storage in the output image data (column 2, line 61 to column 3, line 6 of Evans), wherein the corresponding portion of the original image data of the output image data geometrically matches with the at least the portion of the original picture in the input image data (column 2, line 61 to column 3, line 6 of Evans), and composing the output image data for output such that the second image data is in the output image data and overlays the corresponding portion of the original image data in the output image data (column 3, lines 13-32 of Evans – *watermark then applied to pristine picture, which is then output by a printer*).

Regarding claim 17: Evans discloses extracting the portion of the original image data corresponding to the at least the portion of the original picture data in the input image data (column 2, lines 61-65 and column 3, lines 14-20 of Evans); and replacing the at least the portion of the original picture data in the input image data of the composition input data with the corresponding portion of the original image data (column 2, line 65 to column 3, line 6 and column 3, lines 14-20 of Evans).

Regarding claim 18: Evans discloses pattern matching the original image data with the input image data (column 2, line 65 to column 3, line 6 of Evans).

Regarding claim 19: Evans discloses that the step of pattern matching includes one or more of scaling, rotating, cropping and translating (column 2, line 65 to column 3, line 2 of Evans).

Regarding claims 29, 33, 37 and 41: Evans discloses that the ID information is embedded within the equivalent original picture data stored in the storage means (column 3, lines 29-32 of Evans).

Regarding claims 30, 34 and 38: Evans discloses that the ID information is embedded within the portion of the equivalent original picture data in the processed image data (column 3, lines 29-32 of Evans).

Regarding claims 31, 35 and 39: Evans discloses that one or more portions of the initial image data other than the at least the portion of the original picture (figure 1(portion of 30 that does not contain 31) of Evans) are reproduced in the processed image data (column 3, lines 14-28 of Evans).

Regarding claim 42: Evans discloses that the ID information is embedded within the corresponding portion of the original image data in the output image data (column 3, lines 29-32 of Evans).

Regarding claim 43: Evans discloses that one or more portions of the composition input data other than the at least the portion of the original picture data (figure 1(portion of 30 that does not contain 31) of Evans) are reproduced in the output image data (column 3, lines 14-28 of Evans).

Regarding claims 45, 46 and 47: Evans discloses an image output apparatus (figure 1 of Evans) comprising: reading means (figure 1(14) of Evans) for obtaining initial image data (figure 1(30) of Evans) representing an initial image recorded in an original image (column 1, line 66 to column 2, line 1 of Evans) and ID information (watermark ID) for identifying an original picture by reading the original image having at least a portion of the original picture and the ID information inseparable from the original picture (column 2, lines 7-11 and lines 28-32 of Evans - *as is well-known, an encoded watermark ID is inseparable from the image*), and wherein the original image further includes at least second image data (column 2, lines 61-65 of Evans – *watermark image is second image data*); storage means (figure 1(34) of Evans) for storing a plurality of sets of original picture data in relation to ID information (column 2, lines 30-35 of Evans); reading means (figure 1(22) of Evans) for reading equivalent original picture data ("pristine version") representing an equivalent original picture corresponding to the ID information of the original picture from the storage means (column 2, lines 25-35 of Evans); processing means (figure 1(20) of Evans) for obtaining processed image data for output by comparing the initial image data with the equivalent original picture data and carrying out processing (sizing, rotating, matching, etc.) on the equivalent original picture data (column 2, line 61 to column 3, line 6 of Evans); and output means (figure 1(28) of Evans) for obtaining a print by printing the processed image data (column 3, lines 14-20 and lines 23-28 of Evans), wherein the obtaining processed image data further comprises: extracting a portion of the initial image data that corresponds to the second image data (column 2, line 65 to column 3, line 2

and column 3, lines 57-62 of Evans – *watermark is extracted to produce pristine version of original image*); including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to the at least the portion of the original picture in the initial image data (column 3, lines 14-20 of Evans), wherein the portion of the equivalent original picture data in the processed image data geometrically agrees with the at least the portion of the original picture in the initial image (column 2, line 61 to column 3, line 6 of Evans); and composing the processed image data for output such that the second image data is in the processed image data and wherein the portion of the equivalent original picture data in the processed image data overlays the second image data (column 3, lines 13-32 of Evans – *watermark then applied to pristine picture, which is then output by a printer*).

Further regarding claim 45: The image output apparatus of claim 46 performs the image output method of claim 45.

Further regarding claim 47: The image output apparatus of claim 46 can be embodied on a computer-readable storage medium which causes a computer to execute the steps performed by said image output apparatus (column 4, lines 4-10 of Evans).

Regarding claim 48: Evans discloses a method to output image, comprising: receiving composition input data (figure 1(30) and column 1, line 66 to column 2, line 1 of Evans), wherein the composition input data includes an input image data, wherein the input image data includes at least a portion of an original picture data with ID information (watermark ID) corresponding to the original picture data embedded therein (column 2, lines 7-11 and lines 28-32 of Evans) and at least second image data (column 2, lines 61-65 of Evans – *watermark image is second image data*); extracting the ID information from the input image data (column 2, lines 25-32 of Evans); retrieving from storage an original image data corresponding to the ID information (column 2, lines 25-35 of Evans), wherein the original image data includes the original picture data with the related ID information embedded therein (column 3, lines 29-33 of Evans); and composing an output image data for output (column 3, lines 14-20 and lines 23-28 of Evans), by: replacing at least the portion of the original picture data of the input image data of the composition input data with a corresponding portion of the original image data retrieved from the storage in the output image data (column 2, line 61 to column 3, line 6 of Evans), wherein the corresponding portion of the original image data of the output image data geometrically matches with the at least the portion of the original picture in the input image data (column 2, line 61 to column 3, line 6 of Evans), and composing the output image data for output such that the second image data is in the output image data and the corresponding portion of the original image data in the output image data overlays the

second image data (column 3, lines 13-32 of Evans – *watermark then applied to pristine picture, which is then output by a printer*).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   **Claims 3-5, 8-10 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US Patent 6,577,746 B1) in view of Kenner (US Patent 5,956,716).**

        Regarding claims 3, 4, 8, 9, 13 and 14: Evans does not disclose expressly copying prevention processing means for carrying out processing to prevent copying on the processed image data and/or on the print.

        Kenner discloses copying prevention processing means (figure 4(58) of Kenner) for carrying out processing (column 25, lines 55-62 of Kenner) to prevent copying on the processed image data and/or on the print (column 25, lines 64-67 and column 26, lines 10-13 of Kenner).

        Evans and Kenner are combinable because they are from similar problem solving areas, namely the control of document image data processing and outputting. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a copying prevention means, as taught by Kenner, based on the embedded copy prevention data taught by Evans. The motivation for doing so would have been to deter unauthorized copying and better enable the authorities to track down copyright violators (column 26, lines 9-11 of Kenner). Therefore, it would have been obvious to combine Kenner with Evans to obtain the invention as specified in claims 3, 4, 8, 9, 13 and 14.

        Regarding claims 5/1-5/4, 10/6-10/9, and 15/11-15/14: Evans does not disclose expressly information management means for managing a copyright of the original picture based on the ID information.

        Kenner discloses information management means (figure 4(90) of Kenner) for managing a copyright of the original picture based on the ID information (column 28, lines 46-52 of Kenner).

        Evans and Kenner are combinable because they are from similar problem solving areas, namely the control of document image data processing and outputting. At the time of the invention, it would

have been obvious to a person of ordinary skill in the art to manage the copyright information based on the ID information, as taught by Kenner. The motivation for doing so would have been to be able to properly manage the distribution of copyrighted data (column 28, lines 52-58 of Kenner). There-fore, it would have been obvious to combine Kenner with Evans to obtain the invention as specified in claims 5/1-5/4, 10/6-10/9, and 15/11-15/14.

8.   **Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US Patent 6,577,746 B1) in view of Rhoads (US Patent 5,850,481).**

Regarding claim 20: Evans does not disclose expressly that the ID information is embedded in the original image data and the input image data in one or more subplanes, wherein a dimension of the original image data is mxn pixels, and wherein each subplane is composed of pxq pixels, p<m and q<n, and the subplanes are spaced apart a predetermined number of pixels from each other.

Rhoads discloses that the ID information is embedded in the original image data (column 22, lines 21-26 of Rhoads) and the input image data (column 19, lines 21-26 of Rhoads) in one or more subplanes (figure 13 and column 35, lines 4-9 of Rhoads), wherein a dimension of the original image data is mxn pixels (figure 13(700) of Rhoads), and wherein each subplane is composed of pxq pixels, p<m and q<n (figure 13(704); figure 16; and column 42, lines 40-46 of Rhoads), and the subplanes are spaced apart a predetermined number of pixels from each other (figure 16 and column 42, lines 40-43 of Rhoads). The ID information shown in figure 16 of Rhoads is clearly an area of pxq pixels where p<m and q<n for an mxn image. The fact that the ID information is "wallpapered" in the background demonstrates that the subplanes if the ID information are spaced apart a predetermined number of pixels from each other.

Evans and Rhoads are combinable because they are from the same field of endeavor, namely the processing and control of digital watermark data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform subplane embedding of the watermark data according to the teachings of Rhoads. The motivation for doing so would have been that embedding the ID information in subplanes, as taught by Rhoads, improves the embedded information integrity (column 42, lines 38-41 of Rhoads). Therefore, it would have been obvious to combine Rhoads with Evans to obtain the invention as specified in claim 20.

Further regarding claim 21: Rhoads discloses that a bit value of the ID information is encoded in the subplanes (figure 17 and column 43, lines 25-33 of Rhoads).

Further regarding claim 22: Rhoads discloses that the ID information is modulated on color channels of the original picture data (column 35, lines 4-8 and lines 25-30 of Rhoads).

Further regarding claim 23: Rhoads discloses that the ID information (figure 17(826) of Rhoads) is modulated onto lower bits of the color channels (column 43, lines 25-33 of Rhoads). As can clearly be seen in figure 17 of Rhoads, the "shadow channel" containing the ID information is in the lower bits of the color channel.

Further regarding claim 24: Rhoads discloses that the color channels are R, G and B (column 56, lines 55-57 of Rhoads).

9.   **Claims 32, 36, 40 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US Patent 6,577,746 B1) in view of Godlewski (US Patent 3,852,088).**

Regarding claims 32, 36, 40 and 44: Evans does not disclose expressly that the processed (output) image data are printed on a print medium with a copyguard feature.

Godlewski discloses printing on a printing medium with a copyguard feature (figure 2; figure 3; and column 3, line 50 to column 4, line 17 of Godlewski).

Evans and Godlewski are combinable because they are from the same field of endeavor, namely the control of document copying and distribution. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a copyguard feature when printing the output data on a print medium, as taught by Godlewski. The motivation for doing so would have been to inhibit illegal or unauthorized reproduction of classified or copyrighted information (column 1, lines 2-5 of Godlewski). Therefore, it would have been obvious to combine Godlewski with Evans to obtain the invention as specified in claims 32, 36, 40 and 44.

10.   **Claims 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US Patent 6,577,746 B1) in view of Wolfgang (US Patent 6,625,295 B1).**

Regarding claims 49-52: Evans does not disclose expressly that the original image further includes at least third image data, and wherein obtaining processed image data further comprises composing the processed image data for output such that the third image data is in the processed image data and wherein the third image data overlays both the portion of the equivalent original picture data in the processed image data and the second image data.

Wolfgang discloses the use of multiple watermarks which overlap each other and the original image data (column 6, line 60 to column 7, line 3 of Wolfgang).

Evans and Wolfgang are combinable because they are from the same field of endeavor, namely the identification and processing of digital image data based on embedded image data characteristics. At

the time of the invention, it would have been obvious to a person of ordinary skill in the art to use multiple overlaying watermarks, as taught by Wolfgang. Thus, not only would the processed image data for output be composed such that the second image data is in the output image data and overlays the corresponding portion of the original image data in the output image data, as taught by Evans, but (using the multiple overlapping watermarks taught by Wolfgang, wherein the third image data corresponds to one of the multiple overlapping watermarks) the processed image data is composed for output such that the third image data is in the processed image data and the third image data overlays both the portion of the equivalent original picture data in the processed image data and the second image data. The motivation for doing so would have been to expand the capabilities of watermark identification, such as allowing for tracing the chain of custody of an image (column 7, lines 1-3 of Wolfgang). Therefore, it would have been obvious to combine Wolfgang with Evans to obtain the invention as specified in claims 49-52.
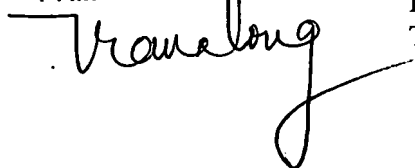
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DOUGLAS Q. TRAN
PRIMARY EXAMINER

James A. Thompson
Examiner
Technology Division 2625

JAT
14 June 2007